

ABSTRACT

An insulated gate field effect transistor, a solid-state image pickup device using the same, and manufacturing methods thereof that suppress occurrence of a shutter step and suppress occurrence of punch-through and injection. An insulated gate field effect transistor (30) having a gate electrode (32) on a semiconductor substrate (11) with a gate insulating film (31) interposed between the semiconductor substrate (11) and the gate electrode (32), and having a source region (33) and a drain region (34) formed in the semiconductor substrate (11) on both sides of the gate electrode (31), the insulated gate field effect transistor including: a first diffusion layer (12) of a P type formed in the semiconductor substrate (11) at a position deeper than the source region (33) and the drain region (34); and a second diffusion layer (13) of the P type having a higher concentration than the first diffusion layer (12) and formed in the semiconductor substrate (11) at a position deeper than the first diffusion layer (12). The insulated gate field effect transistor can be used for a part or all of insulated gate field effect transistors forming an output circuit of a solid-state image pickup device and formed in a semiconductor substrate.